

# Steel Foundries (Except Investment): 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
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-- Not applicable for this report.

# Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
331513, Steel foundries (except investment) .....	2002..	230	248	16 831	630 672	13 116	26 855	442 395	1 367 693	1 166 341	2 536 168	'59 707
2001 ..	N	N	N	19 592	727 361	15 827	33 724	529 336	1 416 684	1 251 297	2 690 486	73 787
2000 ..	N	N	N	22 344	797 149	18 140	39 197	587 408	1 558 218	1 232 044	2 771 377	81 223
1999 ..	N	N	N	23 952	818 054	19 486	41 160	600 757	1 760 636	1 274 967	3 016 953	115 553
1998 ..	N	N	N	24 560	806 689	20 019	41 923	583 722	1 762 940	1 196 770	2 954 419	115 988
1997 ..	263	286		23 472	749 753	19 188	39 716	549 960	1 749 741	1 158 236	2 899 041	124 873

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>331513, Steel foundries (except investment)</b>												
United States .....	2	248	114	16 831	630 672	13 116	26 855	442 395	1 367 693	1 166 341	2 536 168	'59 707
Alabama .....	-	8	2	338	16 651	288	650	13 966	31 390	32 943	65 444	'1 189
California .....	1	25	9	929	35 209	779	1 701	28 219	61 664	44 711	107 800	'3 570
Indiana .....	-	10	5	1 049	39 066	715	1 408	20 678	58 429	84 319	138 481	'2 469
Louisiana .....	2	4	2	178	6 065	143	333	4 660	15 167	8 165	22 877	'282
Michigan .....	2	25	13	1 306	47 364	1 040	2 118	33 677	107 578	77 552	184 033	'5 780
Ohio .....	-	17	10	1 512	48 096	1 187	2 331	34 187	101 646	70 157	175 658	'5 963
Oregon .....	-	7	4	1 098	50 845	653	1 417	23 228	130 751	85 738	216 543	'5 009
Pennsylvania .....	1	28	13	1 269	40 261	1 006	1 891	28 245	80 911	58 273	143 490	'2 830
Texas .....	-	19	10	1 493	53 847	1 198	2 379	38 882	107 252	62 091	169 807	'6 839
Wisconsin .....	1	13	10	1 586	66 547	1 165	2 255	40 447	131 493	70 179	202 804	'5 671

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>331513, Steel foundries (except investment)</b>	
Companies <sup>1</sup> .....	number.. 230
All establishments <sup>2</sup> .....	number.. 248
Establishments with 1 to 19 employees .....	number.. 134
Establishments with 20 to 99 employees .....	number.. 66
Establishments with 100 employees or more .....	number.. 48
All employees <sup>3</sup> .....	number.. 16 831
Total compensation .....	\$1,000.. 807 241
Annual payroll .....	\$1,000.. 630 672
Total fringe benefits .....	\$1,000.. 176 569
Production workers, average for year .....	number.. 13 116
Production workers on March 12 .....	number.. 13 108
Production workers on May 12 .....	number.. 13 159
Production workers on August 12 .....	number.. 13 179
Production workers on November 12 .....	number.. 13 001
Production worker hours .....	1,000.. 26 855
Production worker wages .....	\$1,000.. 442 395
Total cost of materials .....	\$1,000.. 1 166 341
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 839 735
Resales .....	\$1,000.. 93 184
Purchased fuels .....	\$1,000.. 39 800
Purchased electricity .....	\$1,000.. 118 897
Contract work .....	\$1,000.. 74 725
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 3 340 041
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. -
Total value of shipments .....	\$1,000.. 2 536 168
Primary products value of shipments .....	\$1,000.. 2 260 323
Secondary products value of shipments .....	\$1,000.. 142 840
Total miscellaneous receipts .....	\$1,000.. 133 005
Value of resales .....	\$1,000.. 113 676
Contract receipts .....	\$1,000.. 12 004
Other miscellaneous receipts .....	\$1,000.. 7 325
Primary products specialization ratio .....	percent.. 94
Value of primary products shipments made in all industries .....	\$1,000.. 2 336 564
Value of primary products shipments made in this industry .....	\$1,000.. 2 260 323
Value of primary products shipments made in other industries .....	\$1,000.. 76 241
Coverage ratio .....	percent.. 97
Value added .....	\$1,000.. 1 367 693
Total inventories, beginning of year .....	\$1,000.. 348 588
Finished goods inventories .....	\$1,000.. 126 917
Work-in-process inventories .....	\$1,000.. 103 491
Materials and supplies inventories .....	\$1,000.. 118 180
Total inventories, end of year .....	\$1,000.. 343 444
Finished goods inventories .....	\$1,000.. 126 339
Work-in-process inventories .....	\$1,000.. 101 935
Materials and supplies inventories .....	\$1,000.. 115 170
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. 1 400 933
Total capital expenditures (new and used) .....	\$1,000.. '59 707
Buildings and other structures (new and used) .....	\$1,000.. '7 302
Machinery and equipment (new and used) .....	\$1,000.. '52 405
Automobiles, trucks, etc., for highway use .....	\$1,000.. '1 253
Computers and peripheral data processing equipment .....	\$1,000.. '5 433
All other expenditures for machinery and equipment .....	\$1,000.. '45 719
Total retirements .....	\$1,000.. '39 978
Gross value of depreciable assets at end of year .....	\$1,000.. '1 420 662
Depreciation charges during year .....	\$1,000.. '73 521
Total rental payments .....	\$1,000.. 22 789
Buildings and other structures .....	\$1,000.. 10 346
Machinery and equipment .....	\$1,000.. 12 443
Total other expenses <sup>4</sup> .....	\$1,000.. 106 896
Response coverage ratio <sup>5</sup> .....	percent.. 72
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 22 090
Communications services <sup>4</sup> .....	\$1,000.. 3 335
Legal services <sup>4</sup> .....	\$1,000.. 2 875
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 2 769
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 1 161
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 2 643
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 6 603
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 5 405
Taxes and license fees <sup>4</sup> .....	\$1,000.. 3 942
All other expenses <sup>4</sup> .....	\$1,000.. 56 073

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
331513, Steel foundries (except investment)											
All establishments .....	2	248	16 831	630 672	13 116	26 855	442 395	1 367 693	1 166 341	2 536 168	'59 707
Establishments with—											
1 to 4 employees .....	4	67	138	4 940	113	211	3 886	6 314	22 978	29 899	'690
5 to 9 employees .....	8	26	196	7 429	160	325	5 916	14 512	9 951	24 665	'685
10 to 19 employees .....	8	41	534	20 248	422	856	15 839	40 681	23 614	64 760	'1 658
20 to 49 employees .....	2	39	1 157	38 696	941	1 844	27 773	94 509	58 681	152 002	'6 525
50 to 99 employees .....	2	27	1 926	71 648	1 388	2 793	43 867	137 288	91 084	229 052	'10 799
100 to 249 employees .....	—	31	5 048	189 676	4 068	8 354	138 270	433 589	304 032	740 171	'16 271
250 to 499 employees .....	4	11	4 122	174 203	3 187	6 446	121 120	346 833	479 408	824 332	'12 912
500 to 999 employees .....	1	6	3 710	123 832	2 837	6 026	85 724	293 967	176 593	471 287	'10 167
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	108	720	27 360	592	1 188	22 064	56 696	31 809	87 542	'2 020

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
331513	Steel foundries (except investment) . . .	248	16 831	630 672	13 116	26 855	442 395	1 367 693	1 166 341	2 536 168	'59 707
3315131	Other carbon steel castings, except investment . . . . .	47	7 051	253 208	5 748	11 661	197 087	550 373	602 044	1 160 171	'19 387
3315133	High alloy steel castings, except investment . . . . .	38	3 974	166 882	2 835	5 755	98 449	350 524	280 288	623 232	'18 338
3315135	Other alloy steel castings, except investment . . . . .	28	4 555	164 665	3 513	7 412	111 170	380 121	237 810	620 554	'14 259

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
331513	Steel foundries (except investment) .....	2002.. N	X	X	2 336 564
	1997.. N	N	X	X	2 692 742
3315131	Other carbon steel castings, except investment .....	2002.. N	X	X	1 063 445
	1997.. N	N	X	X	1 169 105
33151311	Cast carbon steel railroad car wheels and railway specialties .....	2002.. N	X	X	402 778
	1997.. N	N	X	X	427 879
3315131101	Cast carbon steel railroad car wheels and railway specialties <sup>1</sup> .....	2002.. 26	X	X	402 778
	1997.. 11	X	X	X	427 879
33151312	Other carbon steel castings, except investment .....	2002.. N	X	X	657 505
	1997.. N	X	X	X	741 226
3315131208	Other carbon steel castings, except investment <sup>1</sup> .....	2002.. 59	X	X	657 505
	1997.. N	X	X	X	N
3315131Y	Other carbon steel castings, except investment, nsk .....	2002.. N	X	X	3 162
	1997.. N	X	X	X	N
3315131YVV	Other carbon steel castings, except investment, nsk .....	2002.. N	X	X	3 162
	1997.. N	X	X	X	N
3315133	High alloy steel castings, except investment .....	2002.. N	X	X	600 640
	1997.. N	X	X	X	738 566
33151331	High alloy steel castings, except investment .....	2002.. N	X	X	595 605
	1997.. N	X	X	X	738 566
3315133101	High manganese alloy steel castings, except investment <sup>1</sup> .....	2002.. 22	X	S	137 359
	1997.. 22	X	S	S	162 765
3315133106	Other high alloy steel castings, except investment <sup>1</sup> .....	2002.. 60	X	X	458 246
	1997.. 95	X	X	X	575 801
3315133Y	High alloy steel castings, except investment, nsk .....	2002.. N	X	X	5 035
	1997.. N	X	X	X	N
3315133YVV	High alloy steel castings, except investment, nsk .....	2002.. N	X	X	5 035
	1997.. N	X	X	X	N
3315135	Other alloy steel castings, except investment .....	2002.. N	X	X	554 591
	1997.. N	X	X	X	728 230
33151351	Other alloy steel castings, except investment .....	2002.. N	X	X	549 376
	1997.. N	X	X	X	728 230
3315135101	Other alloy steel railway specialties castings, except investment <sup>1</sup> .....	2002.. 5	X	S	87 880
	1997.. 6	X	D	D	D
3315135106	Other alloy steel rolls for rolling mills, except investment <sup>1</sup> .....	2002.. 5	X	S	23 798
	1997.. 5	X	D	D	D
3315135111	All other alloy steel castings, except investment <sup>1</sup> .....	2002.. 48	X	S	437 698
	1997.. 79	X	206.2	S	586 891
3315135Y	Other alloy steel castings, except investment, nsk .....	2002.. N	X	X	5 215
	1997.. N	X	X	X	N
3315135YVV	Other alloy steel castings, except investment, nsk .....	2002.. N	X	X	5 215
	1997.. N	X	X	X	N
331513W	Steel foundries (except investment), nsk, total .....	2002.. N	X	X	117 888
	1997.. N	X	X	X	56 841
331513WY	Steel foundries (except investment), nsk, total .....	2002.. N	X	X	117 888
	1997.. N	X	X	X	56 841
331513WYWW	Steel foundries (except investment), nsk, for nonadministrative-record establishments .....	2002.. N	X	X	65 169
	1997.. N	X	X	X	S
331513WYWY	Steel foundries (except investment), nsk, for administrative-record establishments .....	2002.. N	X	X	52 719
	1997.. N	X	X	X	S

<sup>1</sup>For additional detail, see Current Industrial Report MA331A, Iron and Steel Castings.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.



**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3315131	Other carbon steel castings, except investment	
	United States .....	2002 .. 1 063 445
		1997 .. 1 169 105
	California .....	2002 .. 10 544
		1997 .. 21 016
	Michigan .....	2002 .. 73 622
		1997 .. 39 198
	Ohio .....	2002 .. 106 373
		1997 .. 167 524
	Pennsylvania .....	2002 .. 54 713
		1997 .. 91 569
	Texas .....	2002 .. 28 752
		1997 .. 57 865
	Wisconsin .....	2002 .. 72 174
		1997 .. 125 349
3315133	High alloy steel castings, except investment	
	United States .....	2002 .. 600 640
		1997 .. 738 566
	California .....	2002 .. 17 588
		1997 .. 21 486
	Michigan .....	2002 .. 61 133
		1997 .. 60 937
	Ohio .....	2002 .. 26 895
		1997 .. 73 633
	Oregon .....	2002 .. 87 645
		1997 .. 57 803
	Pennsylvania .....	2002 .. 51 024
		1997 .. 59 987
	Texas .....	2002 .. 29 970
		1997 .. 37 900
	Wisconsin .....	2002 .. 92 292
		1997 .. 165 484
3315135	Other alloy steel castings, except investment	
	United States .....	2002 .. 554 591
		1997 .. 728 230
	Michigan .....	2002 .. 22 145
		1997 .. 28 643
	Ohio .....	2002 .. 18 626
		1997 .. 17 007
	Pennsylvania .....	2002 .. 25 614
		1997 .. 28 435
	Texas .....	2002 .. 88 157
		1997 .. 93 283
	Wisconsin .....	2002 .. 14 361
		1997 .. 46 177

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
331513	Steel foundries (except investment)		
00900001	Total materials .....2002..	X	839 735
	.....1997..	X	813 365
33120044	Pig iron shapes and forms (excluding silvery iron, castings, forgings, and fabricated metal products) .....2002..	X	D
	.....1997..	X	N
33111204	Ferrochromium shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	14 236
	.....1997..	X	N
33111202	Ferromanganese, silicomanganese, and manganese shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	15 997
	.....1997..	X	N
33111206	Ferrosilicon (more than 8 percent silicon) shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	D
	.....1997..	X	N
33100013	All other ferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	80 425
	.....1997..	X	68 729
33141924	Nickel and nickel-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	24 879
	.....1997..	X	N
33141947	Cobalt-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	4 864
	.....1997..	X	4 095
33141905	All other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	11 059
	.....1997..	X	20 234
00190027	Iron and steel scrap (excluding home scrap) .....2002..	X	215 554
	.....1997..	X	N
00190082	All other purchased scrap, excluding home scrap .....2002..	X	53 871
	.....1997..	X	69 667
32712400	Clay refractories .....2002..	X	5 110
	.....1997..	X	9 609
32791001	Grinding wheels and other abrasive products, excluding industrial diamonds .....2002..	X	16 140
	.....1997..	X	20 664
32712500	Nonclay refractories .....2002..	X	8 995
	.....1997..	X	14 923
32700009	All other stone, clay, glass, and concrete products .....2002..	X	3 651
	.....1997..	X	4 539
33299700	Industrial patterns .....2002..	X	5 632
	.....1997..	X	15 234
33350003	Industrial dies, molds, jigs, and fixtures .....2002..	X	2 116
	.....1997..	X	4 828
001900A5	All other industrial and commercial machinery and computer equipment .....2002..	X	5 644
	.....1997..	X	6 029
21232005	Sand .....2002..	X	23 100
	.....1997..	X	33 532
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	259 740
	.....1997..	X	496 076
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	24 957
	.....1997..	X	45 206

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.